TV degree broadcasts to start next year

University degrees will be offered by television next year for the first time in Australia. A Monash-led consortium has been awarded a $2 million contract by the Federal Government to provide pilot open learning broadcasts from February.

The ABC will be host broadcaster, providing broadcast time free of charge from 7 to 7.30 am each weekday, and a repeat of all courses on Saturday mornings.

The first year courses for first semester probably will include marketing, Australian studies, psychology and biology. Possible second semester subjects are law, accounting, engineering and humanities.

The consortium - Monash, the University of New England and the University of South Australia - was one of eight competitors for the project.

Monash now will invite Deakin University, Griffith University, Wollongong University and the WA Distance Education Consortium to take part. Deakin will be invited to act as the project's evaluator.

Initially, the consortium intends to adapt university-level TV educational programs from the UK, US, Canada and Hong Kong. Australian studies programs will be produced by the ABC.

The overseas material will be augmented by local segments, such as a structured studio tutorial or a relevant interview. Each university in the consortium will provide 15 episodes of TV course material, amounting to 10 units over a full year.

Distance education materials will be provided to students by the universities on a "cost-recovery" basis, ranging from $50 to $100 for each subject. Students will cover the same curriculum, to the same standard, as campus-based and distance education students.

Students also may sit a "challenge examination" for a similar cost. Those who pass will be awarded credit for further study in conventional university courses, but not automatic entry.

There will be no prerequisites or entry quotas. Students will not pay into the Higher Education Contribution Scheme (HECS). Project Manager, Mr Gavin Moodie, said the lack of entrance hurdles attracted students to open learning.

"It is an innovative form of education which makes use of new technologies, and also gives us access to a new audience," he said. "A lot of people watch TV and feel they are being informed, but they never take it much further."

"In addition, teaching by TV offers huge potential savings in the cost of delivering education. We could have 1000 students sitting and passing exams for about the same cost as providing 100 new full-time student places."

"This is obviously attractive, given the high level of unmet student demand and record over-enrolments. It could work out to be radically cheaper than traditional forms of education."

"Just as almost everyone can afford to have a phone or a bank account or a car, more people could then afford a university degree - rather than just 11 per cent of the population."

Project Director and Monash Registrar, Mr Tony Pritchard, said the partnership between the universities and the ABC would extend access to university study, and offer opportunities to those who had previously been denied a university education.

Collectable and classic kids' books uncovered

What do Aesop's Fables, The Comic Adventures of Old Mother Hubbard and Her Dog, and Little May and Her Friend Conscience have in common? They are all children's books written before the 20th century.

These books, together with more recent ones such as Dot and the Kangaroo and Blinky Bill and Nutty, are on display in 'Children's Literature 1476-1946' at the Main Library, Clayton campus.

The exhibition shows British and Australian children's books from the Rare Books Collection - in particular material from the Lindsay Shaw Collection of Australian Children's Books. With his donation of about 6000 books, Mr Shaw, a former Secretary of the Faculty of Education, is one of the main benefactors of the Monash University Library.

"Apart from Australian children's books, Lindsay Shaw also has donated general Australian literature and an important collection of Walter de la Mare material, also held in the Rare Books Collection," Acting Rare Books Librarian, Ms Merete Smith said.

"His collection contains much more than the obvious children's classics commonly available, including much forgotten or little known material and some with obscure or hidden Australian relevance."


The exhibition concentrates on older material, and very little published after World War II is included. Australian material includes books by E. W. Cole, the founder of Cole's Book Arcade in Melbourne, and early editions of works by Ethel and Lilian Turner, Mary Grant Bruce, Ida Rentoul Outhwaite and May Gibbs. Most of the books are illustrated, many in colour.

The exhibition, outside the Rare Books Room, will continue until 28 June.
was awarded to Ms Patricia Major last month. The inaugural Elizabeth Burchill Prize for Excellence in Australian Studies was awarded to Ms Patricia Major last month at an Australian studies postgraduate seminar held at the Australian Studies Centre.

An annual award of $500 will be made to the most outstanding student completing the requirements for the MA (Australian Studies), based on results for all enrolled units. The award is made possible under provisions of the Elizabeth Burchill Fund, established with the broad purpose of encouraging Australian studies. Elizabeth Burchill, a benefactor to the Fund, established with the broad purpose of encouraging Australian studies.

Emeritus Professor John Legge, the Dean of Arts from 1978 to 1986, last month was awarded an honorary degree of Doctor of Letters by Monash University.

He was presented with the honorary doctorate by the current Dean of Arts, Professor Robert Parigger, at the faculty's graduation ceremony in the Robert Blackwood Hall on 3 May.

Professor Legge, foundation professor of history at Monash from 1960 to 1977, delivered an occasional address at the graduation.

The program, organised by Career Planning and Development, is a vehicle for strengthening links between Monash and other institutions, as well as giving staff experience in a different workplace.

Ms Gay, the second person from Monash to take part, will be working as an editorial assistant in the Information Office of the University of Bristol for four months. She is exchanging jobs with Ms Genevive Hawks.

At Bristol, Ms Gay will be working in areas including production and graphic design. "This exchange gives me a unique opportunity to develop both personally and professionally," Ms Gay said.

"Specialising in these particular areas will enhance my knowledge in this field. These skills can then be brought back and applied to my job here at Monash."

Golden Pacific

The supermarket that comes to you on your campus.

High quality and low prices.

All Australian fruit juices and dairy products, so no wonder they're good!

- Monday to Friday: 8 am-9 pm
- Saturday: 8 am-6 pm

The branch has promoted a high level of first aid awareness throughout Monash with a range of first aid courses. From 1988 to 1990 more than 300 staff have been trained in various levels of first aid and now most areas of the university have first aid officers.

"Community awareness of first aid has improved. This has made the response to our courses very encouraging," said Occupational Health Nurse, Sister Maureen Peterson, pictured below with Associate Comptroller Mr John White.

"Monash was chosen for an award because of its lengthy and established commitment to first aid and in recognition of its commitment to improving First Aid awareness within industry and the community," she said.

Other components of first aid training such as heart-lung resuscitation and first aid with chemicals are also provided by the Occupational Health and Safety Branch.

The supermarket that comes to you on your campus.

High quality and low prices.

All Australian fruit juices and dairy products, so no wonder they're good!
Aboriginal student group graduates

One of the largest groups of Aboriginal university students to graduate at the same time received their degrees at Monash last month.

The group consists of six students from the Monash Orientation Scheme for Aboriginals (MOSA). MOSA is the first step towards a university degree for many mature-age Aboriginal students who lack the usual university entry qualifications. Most have studied no further than Year 10, some only as far as primary school.

Established in 1984, MOSA offers bridging programs for entry into arts and science degree courses. A one-year course prepares students for admission into the faculties of Law, Arts, and Economics Commerce and Management.

A two-year course is offered for entrance into the faculties of Medicine, Science and Engineering.

This year 31 students are enrolled in the bridging programs: 17 in arts and 14 in science.

In seven years, 82 students out of a total of 93 have completed the MOSA program successfully.

The six students are (from left, front) Sonia Smillincambe (BA), Helen Garren-Siggers (BA), Angela Singh (BSc) and Rita Stewart (BA); (rear) Robin McNamee (BA) and Virginia Robinson (BA).

Canberra posting for VC’s education adviser

Professor Leo West, Adviser to the Vice-Chancellor, has been appointed to a senior education advisory position in Canberra.

His appointment as Councilor to the National Board of Employment, Education and Training (NBEET), with special responsibility for the Higher Education Council, begins immediately.

In his new role he will work closely with the Chairman of NBEET, Professor Ian Chubb.

"Together we will be able to provide a university perspective in advice reaching the Minister," he said.

The issue of "quality of education, especially teaching" would be tackled head on in 1992.

Professor West has been at Monash since 1975, initially with the Higher Education Advisory and Research Unit (HEARU), and has been the Vice-Chancellor's adviser for the past 18 months.

"The merger at Monash has been easily the most successful of any Victorian university," Professor West said.

Monash was now well placed to take advantage of the next decade's challenges because of the merger and the Vice-Chancellor's policies.

"I'm also particularly grateful for the level of cooperation that I have received from the deans," he said.

At NBEET, Professor West replaces Professor Michael Koder, who has become a Pro Vice-Chancellor at the University of Sydney.

New magazine launched

A new magazine for Monash alumni, friends and business leaders was launched last month.

The Monash Quarterly - a glossy, colour publication - is designed to keep the university's supporters in touch with people and research at Monash.

The first issue includes feature articles on Dr Andrew Prentice's astronomical predictions; Dr Alan Trounson's in vitro work; Professor Margaret Kastoni's thoughts on performing arts; Dr Keith Allen's euhemerism; Dr Colin Hope's Egyptian dig and Ms Greta Bird's approach to multicultural law.

Launching the magazine, Deputy Vice-Chancellor Professor John Hay said the university now had a range of publications which reflected its diversity and excellence.

He said the publications, including Montage, Business Victoria and Etcetera, meant Monash was at last presenting itself appropriately to the wider community.

Professor Leo West: quality of teaching to be tackled head on.

Bus loop for exams

Monash is providing a special bus service to connect the Clayton campus and Caulfield Racecourse during mid-semester exams.

The racecourse is being used as a major exam venue this year on a trial basis. Exams are being held there from 12 to 14, and 17 to 21 June.

The Comptroller, Mr Peter Wade, said the loop was a limited service for students with no other means of transport. "Wherever possible, students should make use of car pooling or public transport," he said.

The direct service to the racecourse will depart from the Clayton campus bus loop at 8.15 am and 1.10 pm on each exam day. Return services will leave the course at 11.30 am, 12.30 pm, 4.15 pm and 5.15 pm.

Drinks and snacks will be on sale outside the exam centre at the racecourse before the morning and afternoon exam sessions.

Catering facilities at the Caulfield campus also will be open, and other food outlets are located in the adjacent Caulfield Plaza shopping centre.

June 1991
Unmet demand increases 40 per cent

Almost 30,000 eligible applicants failed to gain a place at higher education institutions in 1991, according to a survey released by the Australian Vice-Chancellors' Committee (AVCC).

AVCC President, Professor Ken McKinnon, said that between 19,700 and 29,100 were turned away this year, an increase of more than 40 per cent compared to 1990. In Victoria, 18 per cent of eligible applicants did not win a place.

"The unmet demand increase is despite heavy over-enrolment by higher education institutions, caused in the major part by the Federal Government's dual target policy," he said.

Deans' role to be strengthened: VC

The role of deans at Monash is to be strengthened, according to the Vice-Chancellor, Professor Mal Logan.

He told the University Council that, from his discussions with some staff, it was clear that the present system of devolution of responsibility at Monash was not operating satisfactorily. It was also clear that in some cases, faculty boards were not playing as fruitful forums for debate on policy.

"I want to strengthen the role of deans by giving them more responsibility. It's my impression that they are willing to meet the challenge. "We deliberately have a very flat administrative structure with only two deputy vice-chancellors, in contrast with a smaller, nearby university which has up to six deputy or pro vice-chancellors.

"Therefore, it is essential that deans assume more responsibility for maintaining the vital communication links between the administration and departments," Professor Logan said.

The survey showed that the Government's moves to encourage more people to gain better qualifications were beginning to experience higher levels of unmet demand as a result of the redeployment of internal resources by institutions," Professor McKinnon said.

The survey showed that the Government's moves to encourage more people to gain better qualifications were working.

AVCC delays pilot credit transfer project

Australian universities have put on hold plans for a national credit transfer system.

The Australian Vice-Chancellors' Committee (AVCC) Board has indefinitely established a committee to examine what credit transfer arrangements already are in place.

The committee is to report back to the AVCC, although no date has been fixed.

The plans were generated by a team, led by the Monash Registrar, Mr Tony Pritchard, who said the decision would have the power to determine what level of credit a university applicant should receive for previous study undertaken at a university, TAFE college, or in work experience.

Once the authority had assessed the applicant, it would place the student in a higher education institution. The authority is expected eventually to come under the auspices of the AVCC, with the Federal Government funding initial financial support.

"Areas that are not targeted as priority fields by the Government are beginning to experience higher levels of unmet demand as a result of the redeployment of internal resources by institutions," Professor McKinnon said.

The number of people applying for entry based on the completion of the final year of secondary school had increased. However, the Government could not encourage young people to aspire to a university education and then not provide more places and the infrastructure to support them.

Deans' role to be strengthened: VC

The role of deans at Monash is to be strengthened, according to the Vice-Chancellor, Professor Mal Logan.

He told the University Council that, from his discussions with some staff, it was clear that the present system of devolution of responsibility at Monash was not operating satisfactorily. It was also clear that in some cases, faculty boards were not playing as fruitful forums for debate on policy.

"I want to strengthen the role of deans by giving them more responsibility. It's my impression that they are willing to meet the challenge. "We deliberately have a very flat administrative structure with only two deputy vice-chancellors, in contrast with a smaller, nearby university which has up to six deputy or pro vice-chancellors.

"Therefore, it is essential that deans assume more responsibility for maintaining the vital communication links between the administration and departments," Professor Logan said.

The survey showed that the Government's moves to encourage more people to gain better qualifications were beginning to experience higher levels of unmet demand as a result of the redeployment of internal resources by institutions," Professor McKinnon said.

The survey showed that the Government's moves to encourage more people to gain better qualifications were working.

AVCC delays pilot credit transfer project

Australian universities have put on hold plans for a national credit transfer system.

The Australian Vice-Chancellors' Committee (AVCC) Board has indefinitely established a committee to examine what credit transfer arrangements already are in place.

The plans were generated by a team, led by the Monash Registrar, Mr Tony Pritchard, who said the decision would have the power to determine what level of credit a university applicant should receive for previous study undertaken at a university, TAFE college, or in work experience.

Once the authority had assessed the applicant, it would place the student in a higher education institution. The authority is expected eventually to come under the auspices of the AVCC, with the Federal Government funding initial financial support.

"Areas that are not targeted as priority fields by the Government are beginning to experience higher levels of unmet demand as a result of the redeployment of internal resources by institutions," Professor McKinnon said.

The number of people applying for entry based on the completion of the final year of secondary school had increased. However, the Government could not encourage young people to aspire to a university education and then not provide more places and the infrastructure to support them.
Geographers figure highly in world rankings

The university's department of Geography and Environmental Science has featured prominently in a list of recent international citation counts for human geography.

Two Monash academics (one past, one present) were ranked in the top 10 of those whose work was cited most by their peers between 1984 and 1988.

They are Head of the Department of Geography and Environmental Science, Professor Gordon Clark, (ranked number eight with 353 citations), and Dr Ron Johnston (number four, 650 citations). Dr Johnston was the department's first PhD and is now a lecturer at Sheffield University.

Citation counts are generally considered to be one of the best indicators of the impact that individual academics have on a discipline and its direction.

The counts were published in a recent issue of Transactions of British Geographers. To compile the list, author Andrew Bodman, associate professor of geography at the University of Vermont, drew upon sources which review modern geographical journals.

According to Bodman's table, Professor Clark, an expert in urban structure, also recorded the greatest rise in ranking of any of the 'master weavers', whose work was cited heavily.

Ranked 43 at the beginning of the 1980s, Professor Clark was cited in 201 more journals in 1984-88 than in 1981-84.

Conductor Warwick Stengards leads the orchestra's string section through a final rehearsal in Robert Blackwood Hall.

Orchestra looking for more strings to its bow

The new Monash Orchestra made its debut at an examination concert in Robert Blackwood Hall last month.

The orchestra, formed by the Department of Music as part of a new emphasis on music performance at Monash, was conducted by Mr Warwick Stengards.

Mr Stengards, appointed to lead the orchestra for the first semester, said the concert program reflected the orchestra's strengths.

"We hope to attract more string players because at the moment we are a bit light on," he said. "The basic core of the orchestra has about 15 string players but I would like to expand that to at least 40.

"However, we have more wind instrumentalists than we can use so we are casting for the extra musicians with separate ensembles."

The combined group, totalling more than 60 players, will be used as much as possible.

'I think it will take some time to build up - you don't just click your fingers and find an orchestra - but I am very pleased with the players that we have. They all have worked very hard," Mr Stengards said.

The concert program included Mussorgsky's Capriccio for the brass quartet, Gounod's Petite Symphonie for the wind ensemble, David Rose's Naazannee more drum quarts for the percussion ensemble, and Haydn's Symphonies No 104 in D 'London' for the full orchestra.

From second semester, the orchestra will be led by renowned US conductor Mr Gene Young, formerly of the Peabody Conservatorium, Baltimore.

He has conducted at Carnegie Hall and the Kennedy Centre, and has had wide experience in university and conservatory of music orchestras.

Students can gain credit towards their degrees through participation in the orchestra. Credit will be awarded on every campus, in all faculties.

String players, in particular, are invited to contact the Department of Music on extn 75 3230.

New centre to promote religion, society studies

The comparative study of religion and theology is available for the first time at Monash with the establishment of a new centre.

Organised along similar lines to other specialist centres in the Faculty of Arts, the Centre for Studies in Religion and Theology aims to promote scholarship on a non-denominational and comparative basis.

As an interdisciplinary centre, it hopes to provide insights into the understanding of human society, arts, literature, music and history.

It offers undergraduate minor and major sequences in religious studies as well as an honours program and postgraduate degrees by research in religion and theology.

"Centres focusing on religious studies are not new to Australian universities," the centre's director, Associate Professor Gary Bouma, said.

"However, this one is unique in taking a deliberately Australian focus, and by making theology - Christian and that of other religions - a subject of study."

Professor Bouma said that Monash was not getting into the business of training clerics. "The two things that we are doing is a careful postgraduate analysis of religion and a focus on religion in Australian society," he said.

The Dean of the Faculty of Arts, Professor Partridge, added: "The separation between arts and theology has been a relatively recent and unfortunate development in universities. It is impossible to understand the history and development of Western thought and life without an understanding of its religious life and thought."

The centre seeks to coordinate existing resources at Monash and to build intellectual, teaching and research links with the Melbourne College of Divinity (MCD).

It will assist Monash students who wish to take MCD subjects in such areas as biblical studies, theology and church history as part of their BA course.

In addition, Monash and the MCD are in the final stages of securing approval to offer a joint Monash MCA and MCD bachelor of theology degree.

This four year program formalises a cooperative arrangement, that has existed since 1989.

Associate Professor Gary Bouma: Monash is not in the business of training clerics.

June 1991

Montage: * Page 5

NEW51
Computing studies change to be examined

A review of computing studies and information sciences throughout Australia – starting with Monash – is under way to assess the effects of rapid changes in technology on the current curriculum.

The Federal Government review, thrown open to the Department of Employment, Education and Training, aims to identify emerging trends; good practices, and which universities are teaching the disciplines well.

The review committee began its investigations last April. Among its seven members is Professor Fred Symons, of the Department of Electrical and Computer Systems Engineering.

He said that given the wide scope of the review committee's guidelines it was too early to predict what effect the review would have at Monash.

"It has been identified as important to look at the changing technology and the changing needs of the community, and then to see how the courses need to be realigned in some way to produce what is really needed," Professor Symons said.

"Therefore, we will probably come out with some fairly general conclusions about what sort of emphases should be placed.

University innovation featured at science and technology show

Five Monash faculties will present a glimpse of the future at the Great Australian Science Show.

The show, at the World Congress Centre from 10-14 July, will bring together many of Australia's major universities, research organisations, technologists, private companies and corporations.

They will present a program of lectures and demonstrations, as well as more than 100 exhibits and displays covering developments in Australian science, technology and product innovation.

The Monash stand, one of the largest, will feature displays from the Faculty of Science, Engineering, Computing and Information Technology, Medicine and Education.

A computer-controlled robotic arm will be displayed by the Faculty of Computing and Information Technology. Students will be invited to write a software program to make the arm perform a series of balancing acts with a golf ball.

The Solarion solar car, which competed in the World Solar Challenge race from Darwin to Adelaide in December last year, also will be on show.

The show already has attracted the attention of Beyond 2000 television series, which will film major attractions before the official opening.

As well as displays, the show will feature a lecture series covering topics such as human health and fitness, biology and the marine world, the global environment, energy, and outer space.

Monash is well represented with guest speakers. Professor David de Kretser will talk on research in reproduction; Dr Barry Hart will explain how water works; Professor Robert Porter will discuss the role of Australia's medical scientists; and Professor Roger Short will speak on population growth.

The organisers, the Australian Science Network, expect more than 50,000 people will attend the show. It aims to present information in an educational, entertaining and highly accessible manner," one of the organising members, Mr Michael Pickford, said.

Some of the topics to be covered include "Catching crooks which is being developed by the Department of Psychology, and a flow injection analysis working display by the Water Studies Centre for the Faculty of Science.

The show is sponsored by VicHealth (Life. Be In It) and the Fenner Computer Corporation.

For further information and bookings, contact the Australian Science Network on (059) 89 0970, or the Monash stand coordinator, Ms Suzanne Hatherley, in the Public Affairs Office on ext 75 3087.

SWAG team takes aim at office waste

This Caulfield campus team has a ‘SWAG’ of good ideas to make Monash offices greener.

The SWAG (Sustainable Work Action Group) team, led by Ms Kath Ralston, author of Working Green, has initiated projects aimed at reducing office waste.

Ms Ralston, of the School of Management, said she would be happy to help others establish such groups in their faculties or departments.

SWAG suggestions include reducing A4 memos to A5 and photocopying two memos per A4 page, double-sided photocopying, and converting outdated letterheads into scrap-paper telephone pads.

Other ideas are locating paper recycling bins next to photocopiers, using recycled photocopying paper, turning off lights in empty offices, keeping regular circulars in a central file instead of sending a copy to each person, and reusing envelopes for internal mail.

Academic staff have even been asked to clean out their desk drawers and return unused pens, rulers and paper clips to the stationery store for reuse.

"But slowly the three Rs - recycle, reuse and reduce - are infiltrating the campus," Ms Ralston said.

Peaceful protest against nuclear waste

For a report on the national Plastics and the environment forum organised by Monash's business and consulting arm, Monotech, turn to page 10.
Almost 20 years ago, Professor Owen Potter invented a method of burning brown coal more efficiently, and cutting its greenhouse gas emissions.

The technology is now being commercialised, but the benefits are going offshore.

Seeing one's life work taken up and commercialised by industry should be one of the highlights of a scientist's career. In the near future a $30 million coal-drying plant will be built in the Latrobe Valley, exploiting a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.

Professor Potter believes the great tragedy is that Australia has lost the opportunity to add value to one of its most abundant resources, brown coal. And worse, it must now pay to exploit a technology invented at Monash nearly 20 years ago by Professor Owen Potter of the Department of Chemical Engineering.

However, his satisfaction is tempered by the failure of the State Electricity Commission of Victoria and research funding bodies to support the technology, and of Australian companies to invest in it. The consequent delays in commercialising the system will cost Australia and Monash millions of dollars in foregone royalties, he says.
Curing concrete cancer

Concrete cancer - corrosion in reinforced concrete structures - costs about $200 million each year to remedy. Research student Zita Lourenco is refining the "black art" of cathodic protection to prevent even larger repair bills.

Since the middle of the 20th century, reinforced concrete has been a preferred structural material for office towers, shopping centres, bridges, freeway overpasses and even water storage tanks.

Steel-reinforced concrete is strong and offers significant economies because the materials are relatively cheap, easy to work with and facilitate rapid construction. But with the revolution now four decades old, doubts have emerged about the durability of some reinforced concrete structures.

The term "concrete cancer" has been applied to the phenomenon of corrosion of the reinforcement in such structures. Its most visible symptoms include ugly rust stains and unsightly holes and gaps where chunks of concrete have broken off unpredictably from overhanging structures and building interiors.

In Australia, as expert estimate suggests the repair and maintenance of urban infrastructure already in place could absorb the State's entire construction budget by 2030. Yet the problem is largely ignored by government.

"Nobody listens because rust is not exactly glamorous to the general public," Acting Professor Brian Cherry of the Faculty of Engineering said.

A huge public service office completed only in the late 1970s already shows signs of concrete cancer as copious leakages during heavy rainfall. Near Melbourne, a big concrete water storage broke through and flooded a nearby property until it was repaired several years ago.

Dr Cherry says the problem is not confined to Australia; it is endemic to virtually all developed nations. In Hong Kong some years ago, for example, one of the tall chimneys of the Tsing Yi power station was dangerously corroded and, if not repaired in time, could have collapsed. As a result, the power station was to have gone offline, it would have effectively closed down Kowloon.

The problem often lies in the way the concrete is mixed during construction. "Good steel in good concrete doesn't rust. The fact that corrosion does take place is often a result of poor practices and hasty building techniques," Dr Cherry said.

"Until the 1970s, people actually added chlorides to accelerate the setting of concrete; the practice has been banned. And to make the concrete pour more easily, they added extra water to the mix. A high water-cement ratio is disastrous for reinforced concrete."

If corrosion is detected and treated in time, it can be arrested. Yet the techniques for arresting corrosion are still something of a black art. Variations in the chemistry of the concrete, and in the environmental conditions, may demand tailor-made solutions.

Dr Cherry is supervising a project by PhD student Mrs Zita Lourenco, who is attempting to develop a model that will define more precisely the conditions that must be achieved in reinforced concrete to prevent or arrest corrosion, thus removing the guesswork from remedial measures.

Mrs Lourenco says that embedded steel is normally protected by the high pH (alkalinity) of the concrete. The corrosion is due to external agents, such as carbon dioxide diffusing into the concrete from the atmosphere and forming carbonic acid when it mixes with water. By lowering the pH of the concrete, conditions conducive to corrosion are created

Highly corrosive chlorides, deliberately added to the concrete, or absorbed from salt-laden seawater or sea air, can cause very rapid decline in the strength of the reinforcing steel. Beneath Miles Bridge, a reinforced concrete structure over Kananook Creek on the busy Nepean Highway, Mrs Lourenco is conducting a field experiment which will help refine the model she is developing for cathodic protection of reinforced steel structures.

A private company, Remedial Concrete Engineering, pays Mrs Lourenco's salary during her full-time studies and supports the research. The work on Miles Bridge is carried out in cooperation with Vic Roads.

Cathodic protection is not a new concept. The most venerable of modern concrete materials, galvanised iron, exploits the cathodic properties of zinc to protect the underlying iron. Large slabs of zinc are attached to offshore oil platforms and drilling rigs to protect their steel infrastructure against corrosive seawater.

Iron, the main component of steel, corrodes by donating electrons to oxygen. In simple terms, it reacts with oxygen, producing rust. Zinc, given up its electrons more readily, so when a zinc anode is attached to steel, it donates electrons to the steel, preventing the steel from corroding.

The system was installed last June. "The main problem is to know whether it works, and we can't afford to wait a decade to find out," Mrs Lourenco said.

"We need to know that we are supplying enough current to slow down corrosion, but not so much that it might damage the steel.

Mrs Lourenco says these criteria are little more than arbitrary values, often borrowed from other fields, such as the cathodic protection of steel pipelines and offshore drill rigs.

The theoretical basis of these criteria was not well founded, even for the original application, so it is at even more dubious relevance when applied to reinforced concrete buildings and bridges.

Mrs Lourenco is attempting to bring some solid science to the subject, so that the values chosen for any reinforced structure can be optimised. At Miles Bridge she has drilled into the concrete to place reference electrodes close to the steel reinforcement.

These reference electrodes allow the electrical potential of the steel to be measured in situ. The titanium mesh anode is secured to the concrete, and the concrete itself acts as an electrolyte to conduct the impressed current to the embedded steel, and the potential of the steel is changed in the negative direction.

While it is necessary to measure the potential of the steel while the current is on to determine whether the cathodic protection is working, it is equally important to know whether the action of the cathodic protection has changed the system to such an extent that corrosion would be stopped - albeit temporarily - in the natural state (that is, without any current flowing).

This is done by measuring the electrical potential immediately after the current is switched off, and the potential, in the absence of protection, heads off towards more positive values (see figure 1).

The absolute value of the potential seems to be less important than the difference between the values when the current is on and when it is off. The potential decays slowly over a period of about two days until it resumes its rest potential.

Much of Mrs Lourenco's work has been concerned with the development of field techniques to monitor these changes. This is being paralleled by laboratory experiments which enable a more detailed examination to be made.

A set of criteria exists that supposely describe how the steel responds to the impressed DC current, but Mrs Lourenco proposes these are not valid because the real current is not DC but AC, and the potential varies. Mrs Lourenco is not convinced that AC is a better method than DC, but she is investigating the AC problem using a new technique called ACPR.

Mrs Lourenco says ACPR is the only method that can be used to predict the potential of the steel for a given current. The potential of the steel varies with the impressed current, and with time, as the concrete changes the conditions under which the potential is measured.

A suitable technique is to measure the AC current passing through the steel, and then to use a mathematical model to calculate the potential corresponding to that current.
Revealing a mystery gene

Pre-eclampsia, a disease which affects one in every hundred women during their first pregnancy, probably is caused by a defective gene. Its identity remains a mystery, but Dr Shaun Brennecke is part of a team which has narrowed down the continuing search.

Our mothers and grandmothers mistakenly called pre-eclampsia "pregnancy toxæma", believing a mystery toxin in the bloodstream caused the disease that killed pregnant women and their babies with such frequency.

With modern medical practice, deaths are very rare. It is now known that pre-eclampsia is not caused by a toxin, but its real cause remains unclear. So many explanations have been advanced that, among scientists, it has acquired a third name, "the disease of theories".

About one woman in 100 develops full-blown pre-eclampsia during her first pregnancy. The symptoms include high blood pressure, abnormal levels of protein in the urine and generalised swelling of tissues.

In the advanced stages of the disease, a pregnant woman can suffer convulsions and visual hallucinations, including the flashing lights that the Greeks called "ecclampsia".

Dr Shaun Brennecke, senior lecturer in Monash University's obstetrics and gynaecology department and clinical director of the maternal unit at Monash Medical Centre, says obstetricians today are skilled at recognising the early symptoms and intervene by bringing on the birth prematurely.

The disease disappears rapidly after the baby is born, and rarely recurs in subsequent pregnancies.

Dr Brennecke says it was this pattern of rapid recovery, and the rarity of recurrence after the first pregnancy, which drew him to investigate pre-eclampsia.

The first step in finding a cause was to search for the gene defect responsible for pre-eclampsia.

Although the genetic basis of the disease now seems confirmed, the identity of the defective gene remains a mystery. Finding it among the three billion letters of the human DNA code will be an awesome task, but geneticists and molecular biologists have some important clues to go on.

From the moment of conception, and for 40 weeks thereafter, a foetus represents a foreign presence in a woman's body. The immune system first encounters an invader, it is fairly slow to mount a response. Any subsequent encounter produces a much more rapid and focused response; this response seems essential for defusing recurrence of pre-eclampsia.

The placenta is foetal tissue. It contains a cluster of genes, termed on human chromosome six, and some of its constituent proteins are foreign to the maternal immune system. Dr Brennecke says the process of recognition and induction of tolerance must occur where the mother's tissues meet the foetal tissue at the junction between the placenta and the wall of the womb.

The placenta is foetal tissue. Significantly, when it is expelled from the womb at birth, the symptoms of pre-eclampsia rapidly resolve themselves.

Dr Brennecke says this points to pre-eclampsia being triggered by a partial failure of the response that allows the maternal immune system to tolerate the baby's presence in her body.

The fact that the mother rarely suffers pre-eclampsia in subsequent pregnancies also accords with the pattern of an immune system response. When the immune system first encounters an invader, it is fairly slow to mount a response. Any subsequent encounter produces a much more rapid and focused response; this response seems essential for defusing recurrence of pre-eclampsia.

Pre-eclampsia normally occurs in the second half of pregnancy, but there is a rare, specific circumstance when it develops much earlier. Sometimes an error occurs during fertilisation and the fertilised egg, instead of developing into a normal embryo, produces a shapeless mass of tissue called a hydatidiform mole - a grossly malformed placenta.

Interestingly, recent research suggests that the placenta is constructed primarily by paternal genes; since many of its constituent proteins are foreign to the maternal immune system, it invokes a strong response that seems essential for induction of tolerance.

Why should a hydatidiform mole bring on pre-eclampsia much earlier than a normal embryo? Nobody knows, but it is yet another signpost pointing to a defective immune response being the trigger.

The immune system is headquarted on human chromosome six, and consists of a large cluster of genes called the major histocompatibility complex (MHC), which mediate the acceptance or rejection of foreign tissue. Scientists believe the gene that determines the success of failure of organ-transplant operations.

It was a logical place to search, but as it turned out, a wrong one. Dr Brennecke and Professor Cooper, working with a Macquarie University molecular biologist, have shown in a study published recently in 'The Lancet' that pre-eclampsia almost certainly is not triggered by any MCH gene.

They based their conclusions on data from a comprehensive study of inheritance patterns for the pre-eclampsia gene in 10 Australian families, sponsored by the National Health and Medical Research Council.

Pre-eclampsia appears to be a recessive gene disease. A woman must inherit two copies of the gene, one from each parent, to be susceptible.

Individuals with only one copy of the gene (termed carriers) are not at risk. The disease is so common that Dr Brennecke believes as many as one person in four must have a single copy of the gene (a figure that includes males). Mendel's laws of inheritance predict that one male and female in every 64 individuals will inherit two copies of the gene, females in this category are very likely to suffer pre-eclampsia in their first pregnancy.

This figure is so high as to suggest that the pre-eclampsia gene is actually a minor variant of some normal gene. It fulfills its role quite adequately throughout life, but manifests a darker side under the stresses that first pregnancy imposes on the female immune system.

The conclusion that the pre-eclampsia gene is caused by a "normal" gene is supported by the fact that the disease occurs at roughly the same rate in all races and cultures.

With pre-eclampsia now recognised as being of genetic origin, it is one of the most common of all genetic diseases. Cystic fibrosis occurs in one person in 1600, and one person in 20 is a carrier.

They now recognize pre-eclampsia, or being of genetic origin, it is one of the most common of all genetic diseases. Cystic fibrosis occurs in one person in 1600, and one person in 20 is a carrier.

Ten families on which the pre-eclampsia analysis was based, showing disease state. Arrows indicate index cases. Only women who have reproduced, and whose disease state was determined, were included.
Risks to mothers and babies reduced

From Research Monash 3

The mathematics of Mendelian genetics predicts that if two carriers marry, there is a 25 per cent risk that their offspring will suffer pre-eclampsia in pregnancy. If a carrier marries somebody with two copies of the gene, the risk is 100 per cent; if both parents carry two copies of the gene, all their children are at risk.

Dr Brennecke and his colleagues found out families in the latter two categories in their NHMRC-sponsored study. They studied hospital and doctor's records to identify families with a high incidence of pre-eclampsia, looking for those in which the disease appeared in at least two consecutive generations, or where several sisters in the same family were affected.

They rigorously excluded families where the diagnosis could not be definitively confirmed as high blood pressure, tissue-swelling and proteinuria overlap with those of other conditions. Sister Sue Birch, a clinical research nurse in Dr Brennecke's group, spent many hours travelling to remote country hospitals looking for patients who qualified for contact with families and taking blood samples.

The technique used to search for the gene was called linkage analysis, now a standard tool in pedigree studies. Essentially, it involves extracting DNA from white blood cells and cutting it into fragments with DNA-cutting enzymes. The enzymes create millions of fragments, so special techniques are used to identify fragments within and near known genes - in this case, genes from the MHC complex on chromosome six.

Sisters or relatives with the pre-eclampsia gene should yield highly similar patterns of DNA fragments from the MHC region, one that differs from the pattern in unaffected relatives.

The study detected no consistent pattern in the DNA of females who had suffered pre-eclampsia, nor was there any consistent pattern of difference between pre-eclamptic and normal females in the same family. The pre-eclampsia gene could not reside in the MHC complex.

In science, negative results can be as significant as positive findings. Last October, at the World Congress on Hypertension in Pregnancy held in Verona in Italy, Dr Brennecke, Professor Cooper and his Macquarie University colleague Dr Alan Wilson, received first prize for their study.

Dr Brennecke says the team's results thus far do not rule out the abnormal immune-response theory. Many other genes on chromosomes other than chromosome six contribute to the immune response, so the search must now be broadened.

"The gene may be hidden somewhere in one of the other 23 chromosome 'haystacks' of the human genome. However, some of the diverse symptoms of pre-eclampsia may offer clues that would narrow the search," Dr Brennecke and his coworkers hope that by studying genes that contribute to symptoms like hypertension, proteinuria and oedema, they may be able to track back upstream through the cascade of events that characterise the course of the disease, studying the genes involved to identify the single gene that triggers pre-eclampsia.

The increase in blood pressure that occurs in pre-eclampsia might offer important clues.

Blood pressure increases when blood vessels contract; reduced blood flow means poorer oxygenation of tissues and reduced oxygen and nutrient supply to the growing embryo, retard ing its growth. Allowing for the fact that births are often deliberately induced earlier in pre-eclamptic pregnancies to avoid life-threatening symptoms, pre-eclampsia babies tend to be smaller and less well nourished at a compatible stage of development.

Poor oxygen supply can cause liver and brain damage in the mother - the flashing lights of eclampsia are a symptom of oxygen deprivation in the brain.

Several different hormones interact to regulate blood pressure. Thromboxane A2 and endothelin constrict blood vessels, while prostacyclin and endothelin-l-like relaxing factors relax them.

"A study in Italy, Dr Brennecke, Professor Cooper and their colleagues have identified an abnormal immune response in the placenta of women who suffer pre-eclampsia. The team failed to find this abnormality in normal women. They have developed a technique that is now being used internationally through the WHO..."
Changing minds and changing the law

Noted law reformer Professor Marcia Neave has been appointed to a personal chair in the Faculty of Law. Her work over the past decade has led to improvements in the legal rights of women, prostitutes, road accident victims and people in de facto relationships.

While most people would call it eclectic, Professor Marcia Neave, an expert on property and family law, is half correct. In terms of categories, however, she is truly accurate.

Her groundbreaking work on the New South Wales and Victorian law reform commissions has helped to improve the position of a multitude of people - particularly women - in both states, including those in de facto relationships, prostitutes, and the victims of road accidents.

Her inspiration is elementary. "I like to identify what's wrong and then seek to do something about it," she said.

Professor Neave's interest in law reform began in 1982, when she was appointed research director for the New South Wales Law Reform Commission. Over the next two years she played an instrumental role in changing the state's laws relating to wills and de facto relationships.

"Law reform, says Professor Neave, is a slow process. "It's a matter of changing people's minds. It can be extremely slow in some areas, but in others the pace of change can be remarkable," she said.

"For instance, the de facto relationship legislation is unique, not only in Australia but also the world. In NSW, people can now go to court and have property allocated after the relationship has been dissolved, whereas before a de facto partner who had contributed indirectly to their partner's property for many years had difficulty in claiming an interest in that property.

"But now the law takes into account contributions of all kinds, such as those made by women taking care of children.""

The reforms were copied to some extent by Victoria, but here they apply mainly to real property. In NSW they go further. For example, as a result of the reform there, de facto partners can also claim maintenance.

In 1985, Professor Neave, then a reader at Melbourne University, was appointed by the Victorian Government to head an inquiry into prostitution in the state. Her far-reaching recommendations were accepted by the Government, but later were amended in the Upper House.

"The new laws turned out to be a bit of a dog's breakfast that retained existing legislation and combined it with some of my recommendations. In its final form, the legislation decriminalised prostitution in brothels with town planning permits. This means that some prostitution is legal, but some women continue to work illegally," she said.

Professor Neave's interest in how the law responds to women's work continues. At present she is interested in how it relates to women in the home, the sexual division of labour, and how women are treated in the paid workforce.

"About 50 per cent of those women who work are now in the workforce. That's a very large section of the working population with special needs.""

Apart from teaching at Monash, Professor Neave applies her legal expertise to a range of reform bodies; among them the Victorian Law Reform Commission where she is involved in references including sexual offences and equal opportunity.

"As a result of her work on the prostitution inquiry, Professor Neave was appointed to the Australian National Committee on AIDS. This body advises the Federal Minister for Health on issues relating to AIDS, such as the availability of new drugs, public health, and confidentiality.

"Unlike other disciplines, lawyers are generalist. Legal education prepares them for policy work and for instigating social reform," Professor Neave said. That instruction also benefits the teachers.

"I very much enjoy teaching, the process of introducing students to the law and giving them the feeling for the subject; of making them aware of the interaction between law and social policy," she said.

Professor Neave is the first scholar to be appointed to a personal chair in the Law Faculty. She was formerly John Bray Professor of Law at the University of Adelaide.

Getting the gist on executive computers

Senior business managers will be able to assess the latest developments in executive information systems (EIS) at a fair organized by the Department of Information Systems later this month.

At the EIS Fair at the World Congress Centre on 21 June, leading consultants and manufacturers will display their products and be available for consultation.

EIS has been identified as a major growth area in the commercial information systems market. Basically, the systems provide superior management with information to make decisions more effectively. EIS can identify critical areas and help the manager monitor developments.

"The department believes EIS is an important information systems development," Ms Joana Pereira, lecturer in EIS at Caulfield campus, said. "We have recently introduced an EIS subject into our Bachelor of Computing (Honours) and Master of Computing by coursework."

Ms Pereira said the subject had been supported at Monash by the use of two EIS products: Holos from Holos Management Systems, and Commander from Computheque.

These companies had provided substantial directions on their software, and their products supported the practical side of the EIS concepts being studied, she said.

"The department is organizing seminars, events and short courses in the professional information systems area," Ms Pereira said.

"In addition, research projects are underway into EIS. We aim to contribute to the general debate on EIS by providing, as objectively as possible, information about system usage, success and failure, and different development approaches. The EIS fair is one way we can do this."

For more information about the fair, or registration, phone Ms Pereira on 73 2745; or fax 73 2745.
GRANTS & SCHOLARSHIPS

Research grants
ARC International Reciprocal Fellowships
The Australian Academy of Science and the Australian Academy of Technological Sciences and Engineering offer an exchange program with the Royal Society of London. Proposals in any field of basic and applied science, including mathematics and engineering, will be considered. Australian citizens and permanent residents who have undertaken postdoctoral work are invited to apply. 14 June.

Scientific Exchanges with the UK
The Australian Academy of Science and the Australian Academy of Technological Sciences and Engineering offer an exchange program with the Royal Society of London. Proposals in any field of basic and applied science, including mathematics and engineering, will be considered. Australian citizens and permanent residents who have undertaken postdoctoral work are invited to apply. 14 June.

Anti-Cancer Council of Victoria
The Anti-Cancer Council welcomes applications from individual researchers or research teams in clinical, medical or scientific fields for grants to support research projects in all aspects of cancer. All applicants can apply for funding for one, two or three years. 7 June.

Alfred Hospital Postdoctoral Research Fellowship
Graduates who hold a PhD or equivalent in medicine, science, nursing or allied health are invited to apply for seed research awards to conduct a research program within a department of the Alfred Group of Hospitals. Research may be undertaken in any field, discipline or area, but specific grants are available for research into heart disease, leukemia, neurology, bone marrow transplantation, radiotherapy and blindness. 18 June.

DTAC National Teaching Company Scheme
The aim of the DTAC National Teaching Company Scheme is to enhance international competitiveness of Australian industry by developing new and longer term relationships between tertiary institutions or public, sector research agencies and companies in the manufacturing and services sectors. Applicants should submit a joint application for support up to $6,000 per minimum of two years. 14 June.

Australian Tobacco Research Foundation
Applications are invited to support research into the relationship between tobacco smoking and health and disease in its widest context. Grants for research may be used to provide salaries for graduates, technical assistance or for the purchase of equipment and supplies. Grants will be made initially for one to three years to support a specific program of basic, medical or clinical research. 14 June.

Apex Foundation for Autism
The Foundation sponsors research into the incidence, causes, diagnosis and treatment of autistic children, and the principles and behaviour of children diagnosed as autistic, psychotic or schizophrenic. Projects concerned with the health, welfare, social education and recreational requirements of autistic children will be considered. 14 June.

Arthritis Foundation of Australia
The Foundation invites applications for new or continuing short-term rheumatology research and educational projects under the following categories: Special project grants, Foundation grants-in-aid, National Australia Bank research grant, and the Victorian Ladies Bowl Associate Research Grant. 14 June.

The William Buckland Foundation
The William Buckland Foundation makes selective grants to support well-prepared projects which provide benefits of lasting significance to the community and contribute towards the enhancement of life by addressing issues at access to health and education services.

Clive and Vera Ramaciotti Foundations
Applications are invited for grants from institutions undertaking specific projects in medical research and from individuals undertaking medical research within a university, public hospital or other appropriate institution.

The foundation promotes work of quality in research particularly in new fields. Projects of special merit in the field of education in medicine also may be considered. 14 June.

The Hugh D. T. Williamson Foundation
The foundation will provide funding for one year and priority will be given to proposals that will serve a broad section of the community, propose practical approaches to community problems and have a strong element of self-help. 14 June.

For further information, applications forms and guidelines contact the Higher Education Research, 75 3083 or 75 5134. Applications must be lodged by the date specified.

Australian Tobacco Research
The Australian Tobacco Research Foundation is offering a year's research (at NIHAC rates) for full-time graduates conducting research into health issues related to smoking. 30 June.

Scholarships and fellowships

The Benians Fellowships
The Council of St John's College, Cambridge, invites applications for the Benians Fellowships for the academic years 1992-93. Scholarships on leave may apply for the award, which is tenable for one or three years. The recipient will receive an honorarium of £1250 a year and free lodging. 1 September.

Australian Academy of Science Exchanges
The Australian Academy of Science offers several postgraduate and postdoctoral awards to encourage international exchanges and collaboration between scientists. The various awards consist of a monthly living allowance, air fares and travel expenses within the countries of destination, China, France, Japan and the UK. 14 June.

The Hugh D. T. Williamson Foundation
The foundation will provide funding for one year and priority will be given to proposals that will serve a broad section of the community, propose practical approaches to community problems and have a strong element of self-help. 14 June.

For further information, applications forms and guidelines contact the Higher Education Research, 75 3083 or 75 5134. Applications must be lodged by the date specified.

Macleay/Maclay Centenary
The historic collection of the Macleay Museum, University of Sydney, will be opened to the winner of the Macleay/Maclay Centenary Fellowship. The graduate, who should have an interest in zoology and anthropology, will be required to give lectures to the university's students. The award is tenable for between three and six months, and consists of a grant of $20,000 for expenses. 31 July.

Overseas Postgraduate Research Scholarship
Some 50 scholarships will be offered in 1992 to qualified overseas students wishing to undertake research at a postgraduate level in an Australian institution. These are "fees only" awards - scholarship tenure is three and two years for PhD and Masters respectively. Graduates from the countries participating in the Equity and Merit Scheme are not eligible to apply. 27 September.

Special Overseas Postgraduate Fund
About 60 scholarships will be offered in 1992 to qualified overseas students wishing to undertake research at a postgraduate level in an Australian institution. These are "fees only" awards - scholarship tenure is three and two, one year for PhD, masters and postgraduate diploma studies respectively. Graduates from the countries participating in the Equity and Merit Scheme are not eligible to apply. 27 September.

Traineeships for high fliers
The Market Research Society of Australia is offering to train graduates in market research for 10 months at a rate of $18,400 for the duration of the on-the-job training. For further information, telephone 499 2879. 30 August.

The Queensland Treasury Corporation is looking for high achievers in the field of economics, law, management and accounting. For more information, telephone (07) 224 5338.

French Awards
The French Government is offering several fellowships to Australian scientists who wish to visit France for three to six months to further their research. Knowledge of French is a prerequisite. 14 June.

For further information contact the Higher Degrees and Scholarships Section on extn 75 3092.

WANT TO ADVERTISE?
Have you ever wondered how to advertise a course or event? Monash now has an advertising office to arrange the booking and creative design for all promotional advertising.

Earlier this year, Monash signed an agreement with advertising agency Austin Knight to handle all the university's advertising. All recruitment advertising is placed through the Human Resource Services office, and the Communication Department's Advertising Office books and verifies the arrangements for all promotional advertising.

To place a promotional ad, departments must complete an Authority to Book Advertisement form (available from the Advertising Office in numbered books) and then send it to the office through the internal mail or by fax (ext 73 2779) along with the text for the advertisement.

That's all there is to it. When the invoices are received, the Advertising Office will check the costs and pass the invoice to Accounts Payable for processing and send a copy of the department for its records. Austin Knight can also be instructed to provide designs and even write the ads.

Direct advertising inquiries to Advertising Officer Ms Adrienne Dooley on ext 73 2779. Or use the university's electronic mail system: adriane@publications.cc monash.edu.au.
Gippsland’s first grads since merger

More than 700 students from the Gippsland campus graduated last month with Monash awards.

It was the first graduation at Monash University College Gippsland since the merger.

Two graduation ceremonies at the college on 22 May were attended by more than 2000 friends and family members of the 726 graduating students.

To mark the occasion, the Chancellor of Monash, Sir George Lush, presided. In addition, Vice-Chancellor Professor Mal Logan and other senior academics attended.

Keynote speaker at the morning ceremony was the Bishop of Sale, Jeremiah Coffey, Chairman of the Australian Securities Commission, Mr A. Hartnell, was keynote speaker at the afternoon ceremony.

A former student of Monash University College Gippsland, Mr Ricky Iverson, returned to Gippsland from the US to receive his Masters degree at the graduation.

Mr Iverson is completing his Doctor of Philosophy in Sociology at the University of Iowa. He completed his Masters at MUCG in the School of Social Sciences.

Prize winners from engineering faculty

Electrical and computer systems’ top students

1990 prize winners from the Department of Electrical and Computer Systems Engineering are pictured following the April graduation ceremony.

Department staff, prize winners and supporters pictured (left to right) are Mr Nick Antonopoulos (IBM), Professor Bill Bonnisch, Professor Fred Symons, Mr Jamie Chard, Professor Bill Brough, Mrs Ellis Breuer, private donors Marion and Bill Board, Mr Marc Gustini, Associate Professor Ed Cherry, Mr Neville Davis (Philip), and Mr Robert Wilson (Wilson Transformers).

Mr Breuer was the top fourth year student, winner of The Institution of Engineers Award, and the Ian Langlands Medal as the faculty’s top student. Mr Chard was the top third year student and winner of the Jack Wilson Prize; Mr Gustini won the Graham Board Third Year Prize.

Nursing degrees

Nursing graduates were presented with Monash degrees for the first time at a graduation ceremony at Frankston campus last month.

The ceremony was the Bishop of Sale, Serena Doherty, Chairman of the Australian Securities Commission, Mr A. Hartnell, was keynote speaker at the afternoon ceremony.

Keynote speaker at the morning ceremony was the Bishop of Sale, Jeremiah Coffey, Chairman of the Australian Securities Commission, Mr A. Hartnell, was keynote speaker at the afternoon ceremony.

A former student of Monash University College Gippsland, Mr Ricky Iverson, returned to Gippsland from the US to receive his Masters degree at the graduation.

Mr Iverson is completing his Doctor of Philosophy in Sociology at the University of Iowa. He completed his Masters at MUCG in the School of Social Sciences.

Civil engineering class of 1990

Pictured above, at the Department of Civil Engineering’s 1990 prize giving ceremony, are department staff, prize winners and presenters.

They are (back row, from left) Mr David Bell, Mr Timothy Chalmers, Mr Lindsay White; (middle row) Mr Mark Whelan (Scott & Furphy), Mr Moeen Buur-Jensen, Mr Andris Elmanis, Dr Tony Richardson (Melbourne University), Mr Frank Winstone, Mr Andrew Shipton, Mr Ron Thyer (The Institution of Engineers), Mr Mark Waddell, Mr Peter Haworth (Ove Arup & Partners), Mr J. Sharkey, Dr Jack Morgan (Goldfield Associates), and Mr Tom Fricke (Gutteridge Haskins & Davey); (front row) Mr Christopher Kendall, Mr Melanie Boyd, Mr Ian Eadie, Mr Andrew Beardon, Professor Eric Laurencin, Dr Don Kindler (Sy & Weigall), Mr Robert Nestic, and Mr Andrew Western.

Mr Western was the department’s top graduate and the top water engineering student.

Mr White won the Fred Green Memorial Prize for proficiency to the end of third year.
N O T E S  A N D  D I A R Y

JUNE

6 Ecology and Evolutionary Biology Seminar Timing of forgetful trips by Adelaide penguins: biological clocks or biological clocks? by Dr Lloyd David, University of Otago. 10-11 am. Presented by the Department of Comparative Literature and the Centre for European Studies.

Honours and Postgraduate Research Seminars Among the Elenes and Laocoon communities in Melbourne, by Randall Bouchier. Presented by the Department of Music. Seminar room S807, Menzies Building. 9-10 am.

7 Accounting and Finance Seminar Put a cold party in Australia: Russian reinterpretation and additional evidence, by Professor Robert Brown and Mr Stephen Easton. Room 954, Menzies Building. 2-3 pm.

Moot Court (LI) , Faculty of Law, Ground Floor. 10-11 am. Presented by Mr and Mrs Silke Rie quantitative interpretation and the Director of Prime Henry’s Institute of Medical Research, Professor Henry Burger, and the Director of the Institute of Reproduction and Development, Professor David de Kremer.

The lecture will provide an opportunity for members of the audience to question the experts and air concerns in an open forum.

The cost is $15. For further information and bookings, contact Ms Rebecca Lodge on extn 75 2780.

Poetry Prize for Poetry

The Monash University Prize for Poetry, established in 1990, is awarded annually for the best poem by an undergraduate. The value of the prize is $150. Entries must be typed, no more than 150 lines, and the original work of the candidate. Each entry should be submitted under a false de plume and must not bear the author’s name. No more than three entries may be submitted by a candidate.

Postgraduate study in the USA

A representative of the Australian-American Foundation (Canberra) will be on the Clay­ton campus on Thursday 6 July to talk about postgraduate study in the USA. The talk will be held in the Union Building’s Conference Room between 11.30 am and 12.30 pm.

Understanding menopause

The Centre for Reproductive Biology will present a public lecture on Understanding menopause and its consequences on Thursday 6 June in

Forum urges plastics recycling

The future of plastics in Australia was the focus of a national forum entitled Plastics and the environment, held at the World Congress Centre last month.

Held to discuss the viability of plastics recycling in Australia, it brought together many of the major players in the plastics debate.

The forum was organised by Monash’s business and con­suming arm, Monash.

More than 500 manufac­turers, researchers, conserva­tionists, local councils, recyclers and members of the public aired their differences and made recommendations about the efficient use, reuse and dispos­al of plastics.

Delegates took part in a series of syndicates covering topics including three film pack­aging, rigid containers, trade waste, foamed plastics and consumer durables.

Organisers said the ex­change of ideas signalled the beginning of more coopera­tion among groups with opposing views. Plans for a working party to act on the recommendations are under way, and members will be appointed soon.

The opening address was given by Australia’s Ambas­sador for the Environment, Sir Ninian Stephen.

At the forum dinner, more than 200 delegates, including the Australian Business and Industry Association, ICI Plastics, Australasian Corrosion Centre, CSIRO, Plastics Technology and Monash.

Training business better

The Sir John Monash Business Centre wants to strengthen connections with its namesake university.

A joint venture between Monash and the Council of Adult Education, the centre on the fifth floor, 253 Rinders Lane, Melbourne, has rooms and suites to suit casual meetings or large conferences, from six to 150 people.

"Monash doesn’t make use of the centre as much as it could," said director Ms Judy Newbold. "Up until now it has been used mostly as a venue, but we also provide a range of training courses and consultancy support."

"We already have established two integrated programs for supervisors and middle­level managers. In addition, we run general courses such as time management."

"The Sir John Monash Business Centre"

To mark German Week last month, the German Vice-Chancellor, General, Janina Lou (third from left, centre), visited the Department of German Studies to present prizes to various students. Karla Bostocky (bottom, left) won the Goethe prize for the best student in first year. The presentation was also attended by Professor Velt from the department (far left, centre) and the Dean of Arts, Professor Fargher (back row).

Office automation for secretaries

Guest speaker at the next meeting of the Occupational Secretaries’ Networking Group will be the Executive Director of the Monash Centre for Com­puting, Mrs Pearl Levin, who will talk on Office automation.

The meeting will be held on 11 October in the Banquet Room, first floor, Union Build­ing, Clayton campus, at 6.30 pm. For further information, contact Ms Di Barker, extn 75 4110 (Clayton and Frankston campuses) or Mrs Val Grinbal (Caulfield camp­us), extn 73 3071, by 7 June.

Notes

Rotunda Lecture Theatre 1 at 7 pm.

Speakers will include the Director of Menopausal Ser­vices at Monash Medical Cen­tre, Dr Elizabeth Farrell, the Director of Prime Henry’s Institute of Medical Research, Professor Henry Burger, and the Director of the Institute of Reproduction and Development, Professor David de Kremer.

The lecture will provide an opportunity for members of the audience to question the experts and air concerns in an open forum.

"We then provide them with the necessary training to address the skills we have identified."

"With hundreds with many training courses is that people attend for a few hours, and then they go back to their workplace and do nothing differently. We want to get people to use what we have taught them."

She said the centre’s courses combined training sessions with individual, intensive, training courses. The programme covered the new skills training programs at the centre.

Facilities at the centre include a confer­ence room, lecture theatre, syndicate rooms and a board room suite with video equipment. Food and beverage catering can be provided, as well as office support and professional services.

For more information about training pro­grams or bookings, contact the centre on 955 3109.

Pharmacology symposium

An international symposium in honour of Professor A. Boura, Foundation Professor and Chairman of the Department of Pharmacology (1975­1990), will be held at Monash on 29 July.

The symposium, entitled Academic and industrial pharmacology: Past, present and future philosophies for novel drug develop­ment, will run from 9.30 am to 5 pm in medical lecture the­atre MS 53.

For further information, contact Dr J. Oller, extn 75 3732 or Mrs M. Reckman, extn 75 3864.

Accommodation

Brighton: Person wanted to share delightful, furnished, two bedroom, older style flat with 41 year old woman, retired secondary school teacher. Garden, library and office space. Five minute walk from swimming beach. No pets. $70 per week, $80 with garage, share expenses. Phone 592 4146.

Page 10 • Montage

June 1991
Exploring the landscape through a series

Artists who have explored themes and concepts through a series of works are featured in a new exhibition at the Monash University Gallery.

"Prints, series and drawings from the Monash University Collection" will be at the gallery until 14 June.

The exhibition also includes a sound sculpture by Monash's musician in residence, Mr Ernie Althoff. His sculpture in the Russell Drysdale Gallery combines motorised parts, bamboo and bells.

The late Fred Williams is represented by a folio of 12 lithographic prints, based on the landscape of the Werribee Gorge and surrounding areas. This set was bought by the gallery in 1978, four years before the artist's death.

From the exhibition are Fred Williams' lithographic prints of Lal Lal Falls (right) and Werribee Gorge (below).

Born in Cologne, Germany, in 1927, Sellbach's childhood experiences during World War II inspired his series on the horrors of war. His sculpture in the Russell Drysdale Gallery combines motorised parts, bamboo and bells.

Ludwig Hirschfeld Mack was a foundation member and former teacher with the Bauhaus in Germany. His small abstract compositions are a result of experiments with colour theory as it relates to music.

From the exhibition are Fred Williams' lithographic prints of Lal Lal Falls (right) and Werribee Gorge (below).

The Victoria State Opera's 1991 regional touring production of Mozart's 'Cosi fan tutte' will have its only Melbourne season at the Alexander Theatre.

Only a few seats remain for performances on 11, 13 and 15 June. The VSO, a centre of Monash University, last year presented 'The Barber of Seville' at the theatre. Both its performances were sold out.

The VSO's production of 'Cosi fan tutte', in association with the Victorian Arts Council, celebrates the bicentenary of Mozart's death and will tour regional centres this month.

The production will feature the VSO's 1991 Young Artists as soloists, and the Rantos Collegium Orchestra, conducted by VSO musical director, Mr Richard Divall.

Exclusive opera season

The comic opera tells of the loyalties and intrigues of love, and of a wager between two young officers and their friend to prove their fiancées' fidelity.

"For regular opera patrons, the Monash season will be a rare opportunity to see the excellence of the VSO's young artists," Manager of the Alexander Theatre, Mr Phil A'Vard, said. "For those who would not normally be drawn to city productions, the season could provide many with their first ever opera experience."

Tickets cost $33.90 for adults and $26.90 for concession. For bookings contact the Alexander Theatre on extn 75 3992.

Australian writer on campus soon for Paris studio sojourn

Marion Halligan, a full-time writer who lives in Canberra, was in the Department of English for a one-week residency last month.

She is pictured at right with a display of her books in the Clayton campus bookshop.

The residency was the first event in the 1991 Writers-on-Campus program, funded by the Literature Board of the Australia Council, the Vera Moore Fund and the Faculty of Arts.

During the week, Ms Halligan read from her own work and conducted a fiction writing workshop. She also was available for consultation about aspects of writing.

She has worked as a freelance journalist and as a reviewer for the Canberra Times and ABC Radio.

Ms Halligan has published two collections of short stories, The Smashed Man in the Garden and The Living Host, and two novels, Self- Possession and Spidercup.

Recently she won the 1990 Pascali Award for a body of work on literary criticism and will soon be working in Paris, occupying the Australia Council studio.
TW
T THE PAST DECADE has been one of turmoil in
education, resulting in worthwhile initiatives
such as the introduction of the Victorian
Certificate of Education (VCE) and the setting up
of senior secondary colleges.

The conclusions of the Kirby and Blackburn
reports are being put into place with a range of inte-
grated youth and education policies and reforms.
But these changes can be traced directly to the
problems of the early 1980s. The demands of the
1990s will require new directions which is not too
soon to rest on the achievements so far.

We must remember that education has a time lag
of at least 10 years in responding to shifts in society
and the economy. We can no longer afford the time
it takes for education to catch up to changes in the
economy and society.

The new VCE is basically formed on the basis of
the achievements so far, so we should now start the
process of tailoring it to the demands of 1990s. I believe
The VCE is conceptually correct, but in its implementation there
is a need for major adjustment.

There already has been significant input from the
wider tertiary education community: some construc-
tive and some, I suspect, based on other political
agenda.

Many of the suggestions have been addressed by
the Victorian Curriculum Advisory Board, including
improved mechanisms for tertiary selection and the
incorporation of external assessment.

Some of the responses within tertiary education
have been based on a concern that no easy system of
selecting students for tertiary education must be
maintained. However, sometimes these concerns have
been based purely on elitist goals. Many existing
universities have sought to maintain their reputations
by judging the quality of their student intake on
an Anderson Score.

There is a strong case for the worth of a university
being assessed by the value it adds to a student's life.

How long will we continue to allow examinations
to educate their students for the rigours of further study.

and status? When will we, as a community, look at
education's outcomes from our tertiary institutions
on the record of graduate employment?

Nevertheless, the conceptual framework of a
more vital education system is in place and now we
must consider the emerging issues. Firstly, we have
been successful in encouraging more students to
take up year 11 and 12, but there are still too many
who are unprepared for the rigours of further study.

Historically, students have been allowed to Coast
along in junior secondary grades and if we are really
going to have a chance at becoming a clever country
this attitude needs to be blown out of the water.

The development of secondary school clusters
which provides an effective link between the junior
delay, and the senior campuses must be consoli-
dated by allowing greater integration with primary
schools.

Australia will increasingly become part of the
Asian Pacific Region. By the year 2030, 12 per cent
of our population will have an Asian background. Our
major trading activity will be directed towards South-
East Asia.

Therefore, primary and secondary schools
and tertiary institutions will need to establish an even
higher priority for the study of Asian languages and
cultures. Australia has a tradition of being a
hospitable nation where the open door has been a
key to our survival. But the opportunity to
benefit from the dynamism of Asia will be
lost if we do not have a greater sense of
aspiration and urgency in the study of Asian languages.

In the pursuit of increased trade with Asia, the
overriding objective must be the economic
development of Australia. If we are to
meet the demands of Asia, Australia
must have products other countries wish to buy.

The pressure on education to produce highly
educated and skilled graduates, who have the capacity
to be retained and to shift to new areas of employ-
ment, will become even more intense.

Schools have to play their part in creating a more
productive culture. As part of this shake-out, our soci-
ety will be driven by market forces, and an
entrepreneurial approach will become a more domi-
nant feature of education.

Through the use of new technologies, education
and training have the potential to become global.
Stand-alone schools must be aware that the new inter-
active, computer-based technologies can provide spe-
cialist programs for Victorian, Australian and world-
wide audiences.

The two-year VCE was a creature of the social
and economic problems of the early 1980s. As we face
a decade of social change and economic difficul-
ties the VCE will need to evolve further to meet these
demands.

As educators we must learn to respond much
more quickly to the dynamic forces that are shaping
our national and regional societies.

Professor Barry Dunstan is Dean of Academic Affairs
and Head of the School of Applied Science at Monash University.

by Barry Dunstan

The evolution of tertiary education in Victoria
during the 1990s provides the perfect example of the
need for educational flexibility in a post-industrial,
knowledge-based society.

DIOGENES

IN AN INTERVIEW filmed in the out-
back a couple of years ago, that
well-known interpreter of the
human condition, Michael Leunig,
spoke for all of us who were born wide-
eyed in amazement.

"If bewilderment were a crime," the
cartoonist observed, "I'd be in big trouble." The
bewildered's lot is not an easy
one. We are driven constantly around
the bend by the two great imponder-
as. They always refuse to offer a lift back.

Is it little wonder then that we
are asked, instead of being blinked into the
distance while everyone else carries
on as if they had more that just an
inkling?

Sometimes it seems the machina-
tions of life were designed by some
crippled architect simply to flumoo us. If
temporary were indeed a punishable
offence, our prisons would be
overflowing.

For living in the dark corners of someone else's mind or trying to sec-
gue to a bureaucracy is akin to
being left loose blindingfolded in the mid-
dle of a maze. It's a hopeless task.

One of our top-ranking enigmas is
the seeming popularity of organised
religion. It's odd (isn't everything?), but
peculiar things happen when people
got the scent of an aftersilk in their
mouths.

The attraction of something more
mod-cozoned than Planet Earth in Its
1994th year of spiritual renovation has
always been powerful. But when once
pious atheists - the kind who always
thought that the Stations of the Cross
had something to do with Sydney's
transport system - begin to slouch
down the steps, and second, as-busines contin-
ues to prey on everyday language, there
is an expectation that we all should
understand.

But two things have become
patently clear. First, no one under-
stands, and second, as business contin-
ues to prey on everyday language, there
is an expectation that we all should
understand.

Before you can say "There are no
questions" and "end of story", they have stormed
the constitution.

Why the urgent need for a here-
and-now attitude? Do we not-believe outsiders
will glimpse their mortality in the mirror
one morning, decide that the temporal
world is nothing to get worried up
about, and that they might as well book
a ticket for the next stop on this cosmic
journey, just in case?

Or is it a form of escape? The awful real-
isation that their allotted three score
and ten is just a microscopic blip on
the universal time line, and that it's
high time a measure of meaning was
injected into their lives.

It's puzzling. But no less so than a
thousand areas of human endeavours.

Just as confounding is the world of
business: big, small, indifferent and
dire.

Not so long ago, level playing fields
and banana republics were terms to
which we could all relate. They had
meaning. But now that they have been
applied to matters commercial, noth-
ing makes sense any more.

Business used to be about the
arcane - about Dow Jones indexes,
FT1000, unfathomable movements on
the stock market, takeovers. Never
mind, said the bewildered, someone
obviously understands.

But two things have become
patently clear. First, no one under-
stands, and second, as business contin-
ues to prey on everyday language, there
is an expectation that we all should
understand.

When the truth is (typical of the
bewildered), we do not have the slight-
est notion about anything.

As state and federal parliament
conduct their latest leadership chok-
rallie, the confused see a TV parade
of sunblasted faces that offer little more
than the promise of even bigger smiles
on the next news bulletin.

Trust has become a valuable com-
modity. Just when you think you have
found somewhere safe and sound to
put your money - a process that seems to take
longer and longer these days - invari-
ably something happens. Disguises
come off, gloves are removed, and the
confused become even more dazed.

Most children grow through a stage
when in times of trouble they seek
the sanctuary of that small and confined
space beneath their beds. Faced with a
perplexing world, there are certain
occasions when adults too yearn for
the peace of that secluded and silent
refuge between mattress and carpet.

More often than not, however, pride
prevails.

At times like these it is best to sit on
a quiet step somewhere and repeat the
mantra of the terminally amazed: "I
don't believe it!", "Well, I never!", "How on earth?" and "Oh my God!" (of
American origin, but astonishment
known to borders).